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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,538	09/27/2001	Takayo Katsuki	36856.550	8080

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EXAMINER	
EASTHOM, KARL D	

ART UNIT	PAPER NUMBER
2832	

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/965,538	KATSUKI ET AL.8	
	Examiner	Art Unit	
	Karl D Easthom	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how the "junction portion is mechanically attached to one of the electrodes:" and also the "lower terminal includes a junction portion contacting said thermistor element body" because the latter phrase indicates touching of the junction portion to the thermistor body, while the former indicates touching of the electrodes, and there is no disclosure for touching the thermistor body. The terms "about 90 degrees" and "substantially" in claim 1 are relative terms which renders the claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. See Exxon Research and Engineering Co. V. United States (USFedCir) 60 USPq2d 1272 (9/2001)(citing with approval, and distinguishing In re Jolly 172 F.2d 566, 80 USPQ 504 (CCPA 1949)(holding that "a time sufficient to product a substantially homogeneous product but insufficient to ..." was vague and indefinite where the term was critical to patentability). Exxon stated at page 10 of the USPQ web based opinion that "Jolly was a case in which the court was reviewing the rejection of a patent application, not an infringement action based on an issued patent. Patent applicants have the opportunity to amend their claims during prosecution in order to overcome an indefiniteness rejection is vague as a term of degree absent guidelines. The terms about 90 degrees "substantially perpendicular"

over "substantially the entire length" here is vague where applicant argues that the phrases define over the prior art.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-4 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Katsuki et al. '779. Katsuki discloses the claimed invention at Fig. 1 with junction portion 111a, short vertical leg portion the slanted portion contacting the junction portion and lower end portion of 111 rests on the circuit board. Katsuki et al. also discloses the claimed invention at Figs. 7 or 3, where 30a 121a, or the part of 111a are vertical leg portion since 30a has a vertical part where the button part meets extends down to meet the horizontal part 30, and 121a and 111 have vertically extending parts from the electrodes 111a or 101. Or, element 421 has a bent vertical portion as described at col. 7, lines 31-47 since it is "rectangular" instead of "circular" as depicted, meeting claim 2, "in the vicinity of the center. Or, element 431 at Fig. 7 or element 121 at Fig. 3 are bent vertically at an angle of about 90 degrees, with a lower-end portion substantially parallel to the junction portion where the junction portion has a finite area on top that is flat. The portion of upper terminal 5 ,114 or 124 is extended downward - either the parts on the outside of the case, or the part 54 touching the thermistor in Fig. 7.. (Either of these is a vertical leg portion meeting claim 9, with the bent part 51 and the part 54 meets claim 9). Also the portion of 4 outside or inside the case at Fig. 7 extends downward as seen. The horizontal connection portion of claim 7 is 41 since it is bent and connects to a substrate. The

junction portion is mechanically attached to one of the electrodes 24 due to the force of the electrode 51.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frielinghaus in view of Turner. Frielinghaus discloses at Fig. 3 the claimed invention except the resistor being PTC. Turner discloses using similar lead attachments for all resistors, PTC or NTC or otherwise at col. 2, lines 14-33, and discloses using thermistors at col. 4, lines 33-65 to protect equipment, , the same employment of the resistor disclosed by Frielinghaus at col. 1, where a fail safe circuit is disclosed, such that it would have been obvious to replace the resistor of Frielinghaus with a PTC resistor. The upper and lower terminals in Frielinghaus are 20, the junction portion, the short-vertical leg portion and the lower-end portion are all depicted as part of 16 as clearly seen at Fig. 3. The electrodes are the metal contact surfaces described at col. 2, lines 5-10, and col. 2, lines 25-30. In claim 3, the leads 14 overlap with those 16. In claim 4, the button shape is seen. In claim 7, the bent part is where 14 points in Fig. 3. In claim 8, the connection is only "near" the central portion. In claims 9-10, the one vertical portion of 14 is longer than the shorter vertical leg portion of 16, where each lead has two such portions. The device is mounted on printed circuit boards at top of col. 1 so it is "surface-mountable".

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Camp or Katsuki et al. '779, I or Frielinghaus with Turner, in view of, or further in view n view of Nagao et al.

The claimed invention is as disclosed above except for the electrode material. Nagao discloses such a material at the abstract as conventional and for improving flash resistance, see col. 6 and table 5. It would have been obvious to employ the well known material in the manner of Nagao to improve the flash resistance.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuki et al. '779, or Frielinghaus with Turner, in view of, or further in view of Ikeda et al. The claimed invention is as disclosed as noted above except for the electrode material. Ikeda discloses such a material at col. 10, lines 1-5 as a good elastic material for improving thermistors, such that it would have been obvious to employ the well known material in the manner of Ikeda to improve the elasticity.

9. Applicant's arguments filed 12/22/04 have been fully considered but they are moot, or persuasive only as to the removed rejections. Applicant argues that Katsuki et al. does not disclose the vertical-leg portion that is substantially perpendicular over a substantial portion of the length. This is not correct because the terms "substantially" and "about" are broad enough to cover the leg portions 121 or 421 as seen at Figs. 3 and 7. The term "substantial" is defined as "of ample or considerable amount, quantity, or size. The Random House College Dictionary, while about is "near, close to, more or less". The bent portion is "more or less" ninety degrees, while the angle is a considerable amount in relation to perpendicular since it is about half-way there.

Applicant argues that the term "substantially" is defined as "largely but not wholly". It would seem that 45-70 degrees is largely but not wholly ninety degrees. Applicant agrees that "a portion of the profusion 421 ...extends substantially perpendicular to the thermistor body".

Applicant also agrees that the portion extends only a very small portion of the protrusion which extends substantially perpendicular to the thermistor element. Applicant argues that this does not occur over "substantially" the entire length of the vertical portion. Thus the argument is over whether the portion "about 90 degrees" over substantially the entire portion. Since the terms are broad, and not defined, it is met. Applicant essentially argues that 70 is not about 90. This means the argument is over what the term "substantially" means. This is related to the argument concerning the term "about" or "substantially" as one of degree, and that the Examiner is expanding the scope too much, this is not correct. Applicant argues that the terms are given unreasonable interpretations, but applicant has countered with no numerical ranges to define the terms. Applicant argues that Amgen does not apply because there the art is not close, but applicant bases his argument on the his definitions of relative terms "about" and "substantially", and there terms are the very terms addressed in cases noted above. The term "about" is not clear for reasons noted, essentially, applicant is arguing the term takes it away from Katsuki as prior art. But this means that the term is critical and Amgen is directly on point: stating that "Because the term "about" 160000 gives no hint as to which mean value between the Miyake et al. [prior art value] of 128,620 and the mean specific...[claimed] level of 160,000 constitutes infringement", the court held the "at least about" claims to be invalid for indefiniteness". This is the situation here. Applicant argues that 70 degrees is not about 90 degrees. But surely it is "more or less" 90 degrees. And under Amgen, the Court complained about prior art of 128,620 as compared to 160000, which is roughly the same ratio involved here. Applicant provides no definition for what constitutes infringement between the mean value of the prior art angle which looks to be about 45-70 degrees angle over most of the length of the vertical portion. Similarly,

nor does applicant supply what portion of the length is substantially the entire portion. If applicant cannot point to the limits of his claims so that no infringement would occur but also such that his claims distinguish over the prior art , then Amgen dictates the claims are not clear. See also Exxon Research and Engineering Co. cited above, and noting that it is here that applicant can amend his claims to make the terms clear and concise, and distinguishing cases where the term is applied after the patent is presumed valid. The Examiner has no choice but to follow what Amgen dictates. Also, MPEP 2173.05(b) clearly indicates that greater criticality as to the meaning of the terms specificity is required where the element of degree relied upon is the element argued to distinguish the claims over the prior art. See Amgen, Inc. V. Chugai Pharmaceutical Co., 18 USPQ2dn 1016 (Fed.Cir. 1991). As there is no such limiting definitions in the specification and applicant appears to be arguing that the flexible terms define over the art, the broad interpretations by the Examiner are not undue.

As to Frielinghaus, applicant argues that there is no disclosure for the feature of "lower and upper terminals arranged such that each of the electrodes is connected with respective ones of the lower and upper terminals, and each of the lower and upper terminals is extended downward". This is not correct, terminals 14 and 16 extend downward as one looks from left to right of terminal 14, or from center to the outer parts of 16 , for example. The electrodes are as noted above and connected to the terminals.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (272) 571-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (272) 571-1989. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl D Easthom
Primary Examiner
Art Unit 2832

KDE